

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1-11. (cancelled)

1 12. (currently amended) A method for marking a hydrocarbon liquid comprising the steps
2 of:

3 adding a first marker to the hydrocarbon liquid having a molar absorptivity of
4 approximately 5 times 10^4 L mole⁻¹ cm⁻¹ or greater in the wavelength range of about 600-1000
5 nm; and

6 adding to the hydrocarbon liquid a second marker wherein the second marker is a
7 molecular marker, and wherein a molecular weight of the second marker is artificially enhanced
8 with a non-radioactive isotope.

1 13. (previously presented) The method of claim 12 wherein the liquid is a petroleum
2 product.

1 14. (previously presented) The method of claim 12 wherein the desired concentration of the
2 first marker is between 1 ppb and 10 ppb.

1 15. (previously presented) The method of claim 12 wherein the first marker contains a
2 compound selected from the group consisting essentially of metal containing and metal free
3 phthalocyanine, metal containing and metal free naphthalocyanine, squarilium, croconic acid,
4 indole and substituted indole cyanine and carbocyanine, thiazole type cyanine and carbocyanine,
5 oxazole type cyanine and carbocyanine, metal dithiolene complexes, and indoaniline metal
6 complexes.

16. (cancelled)

1 17. (previously presented) The method of claim 12 wherein the second marker is a
2 polynuclear aromatic hydrocarbon.

1 18. (previously presented) The method of claim 12 wherein the second marker is a
2 halogenated hydrocarbon.

1 19. (previously presented) The method of claim 12 wherein the second marker is selected
2 from the group consisting essentially of 1,2-diphenylbenzene, 1,4-diphenylbenzene,
3 triphenylmethane, 1,3,5-triphenylbenzene, 1,1,2-triphenylethylene, tetraphenylethylene, 1,2,3,4-
4 tetrahydrocarbazole, 1,3-diphenylacetone, 2-chlorobenzophenone, 4,4'-dichlorobenzophenone; 4-
5 benzoylphenone; 4-bromobenzophenone, 4-methoxybenzophenone, 4-methylbenzophenone, 9-
6 fluorenone, 1-phenylnaphthalene, 3,3'dimethoxybiphenyl, and 9-phenylanthracene.

20. (cancelled)

1 21. (previously presented) The method of claim 12 wherein the molecular weight is
2 enhanced by the addition of a deuterium atom.

1 22. (previously presented) The method of claim 12 wherein the second marker is selected
2 from the group consisting essentially of acetone, acetonitrile, benzene, bromobenzene,
3 chlorobenzene, chloroform, cyclohexane, dichlorobenzene, trichloroethylene, diethylether,
4 diglyme, dimethylsulfoxide, dioxane, ethanol, methanol, methylene chloride, nitrobenzene,
5 octane, pyridine, tetrachloroethane, tetrahydrofuran, tetramethylsilane, toluene, trifluoroacetic
6 acid, trifluoroethyl alcohol, xylene, ammonium bromide, and acetyl chloride.

1 23. (currently amended) A method for marking a hydrocarbon liquid comprising the steps
2 of:

3 adding a first marker to the hydrocarbon liquid having a molar absorptivity of
4 approximately 5 times 10^4 L mole⁻¹ cm⁻¹ or greater in the wavelength range of about 600-1000

5 wherein the first marker contains a compound selected from the group consisting essentially of
6 metal containing and metal free phthalocyanine, metal containing and metal free
7 naphthalocyanine, squarilium, croconic acid, indole and substituted indole cyanine and
8 carbocyanine, thiazole type cyanine and carbocyanine, oxazole type cyanine and carbocyanine,
9 metal dithioloene complexes, and indoaniline metal complexes; and

10 adding a second marker to the hydrocarbon liquid wherein the second marker is selected
11 from the group consisting essentially of 1,2-diphenylbenzene, 1,4-diphenylbenzene,
12 triphenylmethane, 1,3,5-triphenylbenzene, 1,1,2-triphenylethylene, tetraphenylethylene, 1,2,3,4-
13 tetrahydrocarbazole, 1,3-diphenylacetone, 2-chlorobenzophenone, 4,4'-dichlorobenzophenone; 4-
14 benzoylphenone; 4-bromobenzophenone, 4-methoxybenzophenone, 4-methylbenzophenone, 9-
15 fluorenone, 1-phenylnaphthalene, 3,3'dimethoxybiphenyl, and 9-phenylanthracene.

1 24. (previously presented) The method of claim 23 wherein the liquid is a petroleum product.

1 25. (previously presented) The method of claim 23 wherein the desired concentration of the first
2 marker is between 1 ppb and 10 ppm.

26-50. (cancelled)

1 51. (previously presented) A liquid marker compound comprising:

2 a first marker having a molar absorptivity of approximately 5×10^4 L mole⁻¹ cm⁻¹ or
3 greater in the wavelength range of about 600 to 1000 nm; and

4 a second marker wherein the second marker is a molecular marker, and wherein a
5 molecular weight of the second marker is artificially enhanced with a non-radioactive isotope.

1 52. (previously presented) A liquid marker of claim 51 wherein a desired concentration of
2 the first marker is between 1 ppb and 10 ppm.

1 53. (previously presented) The liquid marker of claim 51 wherein the first marker produces a

2 characteristic peak at a known wavelength.

1 54. (previously presented) The liquid marker of claim 51 wherein the first marker contains a
2 compound selected from the group consisting essentially of metal containing and metal free
3 phthalocyanine, metal containing and metal free naphthalocyanine, squarilium, croconic acid,
4 indole and substituted indole cyanine and carbocyanine, thiazole type cyanine and carbocyanine,
5 oxazole type cyanine and carbocyanine, metal dithiolene complexes, and indoaniline metal
6 complexes.

1 55. (currently amended) A liquid marker of claim 51 wherein the second marker is a
2 polynuclear aromatic hydrocarbon.

1 56. (previously presented) The liquid marker of claim 51 wherein the second marker is a
2 halogenated hydrocarbon.

1 57. (previously presented) The liquid marker of claim 51 wherein the second marker is
2 selected from the group consisting essentially of 1,2-diphenylbenzene, 1,4-diphenylbenzene,
3 triphenylmethane, 1,3,5-triphenylbenzene, 1,1,2-triphenylethylene, tetraphenylethylene, 1,2,3,4-
4 tetrahydrocarbazole-, 1,3-diphenylacetone, 2-chlorobenzophenone, 4,4'-dichlorobenzophenone;
5 4-benzoylphenone; 4-bromobenzophenone, 4-methoxybenzophenone, 4-methylbenzophenone, 9-
6 fluorenone, 1-phenylnaphthalene, 3,3'dimethoxybiphenyl, and 9-phenylanthracene.

58. (cancelled)

1 59. (previously presented) The liquid marker of claim 58 wherein the molecular weight is
2 enhanced by the addition of a deuterium atom.

1 60. (previously presented) The liquid marker of claim 51 wherein the second marker is
2 selected from the group consisting essentially of acetone, acetonitrile, benzene, bromobenzene,

3 chlorobenzene, chloroform, cyclohexane, dichlorobenzene, trichloroethylene, diethyl ether,
4 diglyme, dimethylsulfoxide, dioxane, ethanol, methanol, methylene chloride, nitrobenzene,
5 octane, pyridine, tetrachloroethane, tetrahydrofuran, tetramethylsilane, toluene, trifluoroacetic
6 acid, trifluoroethyl alcohol, xylene, ammonium bromide, and acetyl chloride.

1 61. (currently amended) The liquid marker of claim 54. A liquid marker compound
2 comprising:

3 a first marker having a molar absorptivity of approximately $5 \times 10^4 \text{ L mole}^{-1} \text{ cm}^{-1}$ or
4 greater in the wavelength range of about 600 to 1000 nm, wherein the presence of the first
5 molecular marker can be determined by a handheld IR spectrometer; and

6 a second marker wherein the second marker is a molecular marker, wherein a molecular
7 weight of the second marker is artificially enhanced with a non-radioactive isotope.

62-68. (cancelled)